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EXAMINER

VU, TRISHA U

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 10/30/2003

2

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/821,522

Applicant(s)

HANSON ET AL.

Examiner

Trisha U. Vu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2001.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

1. Claims 1-69 are presented for examination.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-69 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Independent claims 1, 24 and 47 contain subject matter "Secure Digital input/output (SDIO) card" which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. At the time of the invention, SDIO card specification has not yet been published, therefore one of ordinary skill in the art would not be able to make and/or use of the invention with SDIO card. The examiner interprets SDIO card as just a card.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 49 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is insufficient antecedent basis for limitation "the handheld computer" (line 3) in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 47-49, 52, 54-55, 61, 64, and 66-67 are rejected under 35 U.S.C. 102(e) as being anticipated by Ito et al. (US 2001/0042149) (herein after Ito).

As to claims 47, 48, 64, Ito teaches an expansion device (device 1 and other connected modules as shown in Fig. 1) for a portable electronic device (PC 5), comprising: a Secure Digital input/output (SDIO) card (device 1) including an interface configured to be coupled to the electronic device (Fig. 4A); an accessory device (at least one of connected devices such as SD card, battery, antenna, ...) coupled to the SDIO card; an expansion slot (at least slot for connecting a SD card) coupled to the SDIO card, the expansion slot configured to selectively couple to one of a Secure Digital (SD) card and a multimedia card (MMC) (note Fig. 1 and [0031], [0032]).

As to claim 49, Ito further teaches the interface is configured to be coupled to a slot in a housing of the portable electronic device (Fig. 4A).

As to claim 52, Ito further teaches the accessory device includes an audio player (audio record/reproduce device) (note [0034]).

As to claim 54, Ito further teaches the accessory device includes voice recorder (record/reproduce device) (note Fig. 1 and [0109]-[0111]).

As to claim 55, Ito further teaches the accessory device includes Bluetooth transceiver (Fig. 1 and [0039], [0040]).

As to claim 61, Ito further teaches the accessory device includes a pedometer (travel distance detecting circuit) (note [0043], [0097]).

As to claims 66 and 67, Ito further teaches the expansion slot is configured to accept a battery and the battery is rechargeable (note [0045]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0042149) (herein after Ito) in view of Petty (6,389,486).

As to claims 50 and 51, the argument above for claim 47 applies. However, Ito does not explicitly disclose the accessory device includes a positioning system device. Petty teaches positioning system device (GPS cards) (col. 1, lines 43-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include GPS receiver as taught by Petty in the expansion module of Ito to provide the geographic location of the module.

6. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0042149) (herein after Ito) in view of Hawkins et al. (6,442,637) (herein after Hawkins).

As to claim 53, the argument above for claim 52 applies. However, Ito does not explicitly disclose the accessory device includes an MP3 player. Hawkins teaches MP3 player (col. 4, lines 13-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a MP3 player as taught by Hawkins in the expansion module of Ito because MP3 player produces CD-quality music in a compressed file that can be transferred quickly.

7. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0042149) (herein after Ito) in view of Jones (6,145,046).

As to claim 56, the argument above for claim 47 applies. However, Ito does not explicitly disclose the accessory device includes a digital camera. Jones teaches digital camera using memory card (Fig. 1A and col. 3, lines 6-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement digital camera as taught by Jones in the system of Ito to provide picture capture function to the expansion module without using photographic film.

8. Claims 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0042149) (herein after Ito) in view of Nakashima (6,182,204).

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As to claims 57-59, the argument above for claim 47 applies. However, Ito does not explicitly disclose the accessory device includes a FM tuner and/or television tuner. Nakashima discloses FM tuner and television tuner (col. 1, lines 14-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include FM tuner and/or television tuner as disclosed by Nakashima in the expansion module of Ito for further receiving television and/or radio broadcasts to the system.

9. Claims 60 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0042149) (herein after Ito) in view of Yu (6,362,794)

As to claims 60 and 69, the argument above for claim 47 applies. However, Ito does not explicitly disclose the accessory device includes a wireless networking card. Yu teaches wireless networking card (wireless LAN card) (note col. 1, lines 6-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include wireless LAN card as taught by Yu in the expansion module of Ito to provide connection to a wireless network.

10. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0042149) (herein after Ito) in view of Rajchel (6,272,575).

As to claim 62, the argument above for claim 47 applies. Ito does not explicitly disclose the accessory device includes a cellular telephone transceiver. Rajchel discloses a card module to receive cellular telephone transceivers to be used with a handheld computer (col. 4, lines 25-37). It would have been obvious to one of ordinary skill in the

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art at the time the invention was made to include cellular telephone transceiver as taught by Rajchel in the expansion module of Ito to quickly establish a national telecommunications network.

11. Claims 63 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0042149) (herein after Ito) in view of Endejan et al. (6,427,918) (herein after Endejan).

As to claim 63, the argument above for claim 47 applies. However, Ito does not explicitly disclose the expansion slot is configured to accept a MMC card. Endejan discloses MMC cards (col. 1, lines 49-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include MMC card as taught by Endejan in the system of Ito to add functionalities to a PDA while continuing to conform to the size restrictions of the PDA, also these new media cards are easily carried by the user and convenient to use (col. 1, lines 51-64).

As to claim 65, Endejan further teaches both of a SD card and a MMC card may be used selectively and singularly in the expansion slot (col. 1, lines 49-64 and col. 2, lines 8-14).

12. Claims 1-3, 14, 18-21, 23-26, 37, 41-44, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (6,266,724) in view of Endejan et al. (6,427,918) (herein after Endejan).



As to claims 1, Harari teaches an expansion device (mother/daughter card 100) for a handheld computer, comprising: a Secure Digital input/output (SDIO) card (at least mother card or mother card and some daughter card(s) in combination) including an interface configured to be coupled to the handheld computer (Fig. 1); an accessory device (one of the daughter cards/battery pack) coupled to the SDIO card (col. 10, lines 58-60); an expansion slot coupled to the SDIO card (one of the plurality of slots for receiving the daughter cards). However, Harari does not explicitly disclose the expansion slot configured to selectively couple to one of a Secure Digital (SD) card and a multimedia card (MMC). Endejan teaches Secure Digital card and multimedia card (col. 1, lines 49-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include SD card and/or MMC as taught by Endejan in the system of Harari to add functionalities to a PDA while continuing to conform to the size restrictions of the PDA, also these new media cards are easily carried by the user and convenient to use (col. 1, lines 51-64).

As to claim 24, Harari teaches a handheld computer comprising: a housing (in host system 200); a slot in the housing, the slot including an electrical connector (connector 212) (note Fig. 1); a Secure Digital input/output (SDIO) card including an interface coupled to the slot in the housing and coupled to the electrical connector (note Fig. 1); an accessory device (one of the daughter cards/battery pack) coupled to the SDIO card (col. 10, lines 58-60); an expansion slot coupled to the SDIO card (one of the plurality of slots for receiving the daughter cards). However, Harari does not explicitly disclose the expansion slot configured to selectively couple to one of a Secure Digital

(SD) card and a multimedia card (MMC). Endejan teaches Secure Digital card and multimedia card (col. 1, lines 49-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include SD card and/or MMC as taught by Endejan in the system of Harari to add functionalities to a PDA while continuing to conform to the size restrictions of the PDA, also these new media cards are easily carried by the user and convenient to use (col. 1, lines 51-64).

As to claims 2 and 25, Harari as modified by Endejan further teaches the SDIO card includes Secure Digital (SD) memory (as addressed in claim 1 above) (Endejan, col. 1, lines 49-64).

As to claims 3 and 26, Harari further teaches the expansion device for a handheld computer of claim 1, wherein the interface is configured to be coupled to a slot in a housing of the handheld computer (Fig. 1).

As to claims 14 and 37, Harari further teaches the accessory device includes a networking card (col. 4, lines 65-67 and col. 5, lines 1-3).

As to claims 18 and 41, Harari as modified by Endejan further teaches the expansion slot is configured to accept a MMC memory card (as addressed in claim 1 above) (Endejan, col. 1, lines 49-64).

As to claims 19 and 42, Harari as modified by Endejan further teaches the expansion slot is configured to accept SD memory (as addressed in claim 1 above) (Endejan, col. 1, lines 49-64).

As to claims 20 and 43, Harari as modified by Endejan further teaches both of a SD memory card and a MMC memory card may be used selectively and singularly in the

expansion slot (as addressed above in claim 1, different kinds of cards and any number of cards can be used) (Harari, col. 4, lines 56-67).

As to claims 21 and 44, Harari further teaches the expansion slot is configured to accept a battery (col. 10, lines 58-60).

As to claims 23 and 46, Harari as modified by Endejan further teaches a second expansion slot (another slot of the plurality of slots) coupled to the SDIO card, the second expansion slot configured to selectively couple to at least one of a SD card and a MMC card (as addressed above in claim 1, different kinds of cards and any number of cards can be used) (Harari, col. 4, lines 56-67).

13. Claims 4-5 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (6,266,724) and Endejan et al. (6,427,918) (herein after Endejan), and further in view of Petty (6,389,486).

As to claims 4-5 and 27-28, the arguments above for claims 1 and 24 apply.

However, Harari and Endejan do not explicitly disclose the accessory device includes a positioning system device. Petty teaches positioning system device (GPS cards) (col. 1, lines 43-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include GPS receiver as taught by Petty in the expansion module of Harari and Endejan to provide the geographic location of the module.

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14. Claims 6-7 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (6,266,724) and Endejan et al. (6,427,918) (herein after Endejan), and further in view of Hawkins et al. (6,442,637) (herein after Hawkins).

As to claims 6-7 and 29-30, the arguments above for claims 1 and 24 apply.

However, Harari and Endejan do not explicitly disclose the accessory device includes an audio player. Hawkins teaches an expansion audio player (MP3 player) coupled to a mobile computer (col. 4, lines 13-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a MP3 player as taught by Hawkins in the expansion module of Harari and Endejan to provide audio player function to the module.

15. Claims 8-9, 16, 22, 31-32, 39, and 45, are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (6,266,724) and Endejan et al. (6,427,918) (herein after Endejan), and further in view of Ito et al. (US 2001/0042149) (herein after Ito).

As to claims 8 and 31, the arguments above for claims 1 and 24 apply. However, Harari and Endejan do not explicitly disclose the accessory device includes a voice recorder. Ito teaches voice recorder accessory device (record/reproduce device) coupled to an expansion module (peripheral device 1) which is coupled to a mobile computer (note Fig. 1 and [0109]-[0111]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement voice recording circuitry as suggested by Hawkins in the expansion device of Harari and Endejan to provide recording function to the mobile computer.

As to claims 9 and 32, the arguments above for claims 1 and 24 apply. However, Harari and Endejan do not explicitly disclose a Bluetooth transceiver. Ito teaches Bluetooth transceiver coupled to an expansion module (peripheral device 1) (Fig. 1 and [0039], [0040]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Bluetooth circuitry as taught by Ito in the expansion module of Harari and Endejan to provide wireless connection to other systems.

As to claims 16 and 39, the arguments above for claims 1 and 24 apply. However, Harari and Endejan do not explicitly disclose the accessory device includes a pedometer. Ito teaches pedometer (travel distance detecting circuit) (note [0043], [0097]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pedometer as taught by Ito in the expansion module of Harari and Endejan to detect the travel distances of an input device.

As to claims 22 and 45, the arguments above for claims 21 and 44 apply. However, Harari and Endejan do not explicitly disclose the battery is rechargeable. Ito teaches rechargeable battery to provide power to the card module (note [0045]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include rechargeable battery as taught by Ito in the expansion module of Harari and Endejan so that the battery can be reused and thus minimizing cost for the user.

16. Claims 10 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (6,266,724) and Endejan et al. (6,427,918) (herein after Endejan), and further in view of Jones (6,145,046).

As to claims 10 and 33, the arguments above for claims 1 and 24 apply.

However, Harari and Endejan do not explicitly disclose the accessory device includes a digital camera. Jones teaches digital camera using memory card (Fig. 1A and col. 3, lines 6-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement digital camera as taught by Jones in the system of Harari and Endejan to provide picture capture function to the expansion module wherein the memory card in the expansion module can be used for frame storage.

17. Claims 11-13 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (6,266,724) and Endejan et al. (6,427,918) (herein after Endejan), and further in view of Nakashima (6,182,204).

As to claims 11-13 and 34-36, the arguments above for claims 1 and 24 apply.

However, Harari and Endejan do not explicitly disclose the accessory device includes a FM tuner and/or television tuner. Nakashima discloses FM tuner and television tuner (col. 1, lines 14-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include FM tuner and/or television tuner as disclosed by Nakashima in the expansion module of Harari and Endejan for further receiving television and/or radio broadcasts to the system.

18. Claims 15 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (6,266,724) and Endejan et al. (6,427,918) (herein after Endejan), and further in view of Yu (6,362,794)

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As to claims 15 and 38, the arguments above for claims 1 and 24 apply.

However, Harari and Endejan do not explicitly disclose the accessory device includes a wireless networking card. Yu teaches wireless networking card (wireless LAN card) (note col. 1, lines 6-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include wireless LAN card as taught by Yu in the expansion module of Harari and Endejan to provide connection to a wireless network.

19. Claims 17 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (6,266,724) and Endejan et al. (6,427,918) (herein after Endejan), and further in view of Rajchel (6,272,575).

As to claims 17 and 40, the arguments above for claims 1 and 24 apply.

However, Harari and Endejan do not explicitly disclose the accessory device includes a cellular telephone transceiver. Rajchel discloses a card module to receive cellular telephone transceivers to be used with a handheld computer (col. 4, lines 25-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include cellular telephone transceiver as taught by Rajchel in the expansion module of Harari and Endejan to quickly establish a national telecommunications network.

### ***Conclusion***

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, as the art discloses SDIO card:

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1. "Secure Digital Input/Output (SDIO) Card Specification", Version 1.00,  
October 2001, SD Association.

The following art discloses expansion module with connected accessory device(s)/card(s):

- |    |             |              |                   |
|----|-------------|--------------|-------------------|
| 2. | US Patent   | 6,199,168    | Miller            |
| 3. | US Patent   | 6,571,308    | Reiss et al.      |
| 4. | US Patent   | 6,599,147    | Mills et al.      |
| 5. | US Patent   | 6,052,381    | Henriksson et al. |
| 6. | US Patent   | 6,570,767    | Vapaakoski et al. |
| 7. | US Patent   | 6,438,638    | Jones et al.      |
| 8. | US Pub. No. | 2002/0080091 | Acharya et al.    |


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trisha U. Vu whose telephone number is 703-305-5959. The examiner can normally be reached on Mon-Thur and alternate Fri from 7:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Trisha U. Vu  
Examiner  
Art Unit 2189

uv

  
Glenn A. Auve  
Primary Patent Examiner  
Technology Center 2100